

Notice of Allowability

Application No.

10/542,771

Examiner

Charles Chow

Applicant(s)

AIZAWA, JUNICHI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/10/2007.
2. ☒ The allowed claim(s) is/are 1-11 and 16-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Detailed Action

1. This office action is for amendment dated 10/10/2007.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Claims 1-11, 16-22 are allowable over the prior art of record. The prior arts fail to teach the allowable features, singly, particularly, or in combination or rendering obviousness.

Applicant has amended independent claims 1, 6, 12, 14-15 with the allowable limitation features, having structural linkages, in the independent claims, for controlling of the transmitting, receiving, channel quality, for an apparatus, a method & a system.

The cited prior arts fail to teach the limitation features for:

a CQI transmission timing controller that **determines a transmission timing of the CQI update cycle** information stored in the memory **and a transmission timing of the CQI based on the CQI repetition count** information stored in the memory,

when the transmission timing of the CQI based on the CQI update cycle information and the transmission timing of the CQI repetition count information **overlap**,

commands to transmit the CQI at the transmission timing based on the CQI repetition count information, to the communicating party with priority; and

a CQI transmitter that transmits the CQI at the transmission timings determined by the CQI transmission timing controller according to the command **[claims 1, 21];**

the above limitation features in claim 1, together with a CQI receiver and decoder that receives and decodes the CQI at the repetition timings determined by the CQI reception timing controller, according to the command **[claim 6];**

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the above limitation features in claim 1, together with a second memory that stores the CQI update cycle information and second CQI repetition count information representing how many consecutive times the same CQI is received and decoded,

the reception timing controller that determines a reception timing of the CQI...for the commands to receive and decode [claim 19];

determines a reception timing of the CQI based on predetermined CQI update cycle information, and a reception timing of the CQI based on the CQI repetition count information..., **when** the reception timing of the CQI based on the CQI update cycle information **and** ... CQI repetition count information **overlap**,

commanding to receive and decode the CQI at the reception timing based on the CQI repetition count information with priority; and

receiving and decoding the CQI at the determined reception timings, according to the command [claim 22].

The dependent claims are also allowable due to their dependency upon the allowable independent claims above and the having additional claimed features.

The closed prior art, **Choi et al. [US 2004/0022,213 A1]**, teaches a radio transmission apparatus, UE 130, [Fig. 1/Fig. 10] measures received downlink channel quality & reports CQI back to node B, paragraph 0010, abstract; determining a optimal, CQI report cycle, [paragraph 0016, 0019, 0014]; the counter 718 stored with the ACK/NACK counts, for the counting of the same ACKs acknowledge of the normal received data, & the counting of the same NACKs negative acknowledge, failure, of normal received data [paragraph 0116, 0112, paragraph 0116-0119], but fails to teach the above limitation features.

Dottling et al. [2006/0285,558 A1] teaches the transmitting CQI feedbacks with top priority, associated with a time interval for CQI feedback [paragraph 0068, 0073], for a

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secure, reliably communication link, having the CQI report through a time interval

[paragraph 0073], but fails to teach the limitation missing by Choi above.

Other prior arts in below are also considered, but they fail to teach the above allowable features.

Lundby et al. [US 6,985,453 B2] teaches the remote station transmits measured channel link quality message periodically, to a based station according to the updated cycles t1 to t3 [Fig. 3D; Fig. 5, abstract, col. 4, lines 59-60, col. 4, line 48 to col. 5, line 26; col. 7, lines 43-67].

Zimmerman et al. [US 6,775,547 B2] teaches the updating the transmission quality measurement period utilized by the remote station for sending back a report to base station [abstract, Fig. 1, col. 5, lines 24-37; col. 4, lines 42-62; col. 3, lines 39-41; the better the quality, the longer of the transmission quality period is [col. 9, line 57 to col. 10, line 30].

Yoshimi et al. [US 5,603,093] teaches the synchronizing to the transmitting timing [step S1, Fig. 7A] & the monitoring of a timer in order to measure the link quality for reporting to a base station. The timer can be set to 1 or 5 minutes [col. 7, lines 10-60].

Other prior arts are considered also. They are: **Dottling et al. [US 2006/0133,402 A1]**, **Yu et al. [US 2005/0191,965 A1]**, **Araki et al. [US 2005/0255,807 A1]**, **Marinier et al. [US 2007/0047,502 A1]**, **Malm [US 2007/0026,803 A1]**, **Thornton et al. [US 2004/0176,040 A1]**, **D'Amico et al. [US 2004/0032,853 A1]**, **Kim et al. [US 2005/0243,793 A1]**, **Fukui [US 7,089,015 B2]**, **Pietraski [US 2004/0142,698 A1]**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles C. Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow *CC*.

October 16, 2007.


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